



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,959	01/15/2004	Linda Gail Bernard	71111 US 04	5051

7590 10/09/2007
Dennis V. Carmen
Eastman Chemical Company
P.O. Box 511
Kingsport, TN 37662-5075

EXAMINER

HAIDER, SAIRA BANO

ART UNIT	PAPER NUMBER
----------	--------------

1796

MAIL DATE	DELIVERY MODE
-----------	---------------

10/09/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/757,959

Applicant(s)

BERNARD ET AL.

Examiner

Saira Haider

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24-28 and 30-56 is/are pending in the application.
- 4a) Of the above claim(s) 30-56 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 7/16/2007.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. The rejections have been maintained and altered to reflect the currently pending claims.

Priority

2. It is noted that this application appears to claim subject matter disclosed in prior Application No. 09/630,517, filed 8/2/2000. However, applicants have not satisfied the requirements, set forth below, for the benefit claim.

3. A reference to the prior application must be inserted as the first sentence(s) of the specification of this application or in an application data sheet (37 CFR 1.76), if applicant intends to rely on the filing date of the prior application under 35 U.S.C. 119(e), 120, 121, or 365(c). See 37 CFR 1.78(a). For benefit claims under 35 U.S.C. 120, 121, or 365(c), the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of all nonprovisional applications. If the application is a utility or plant application filed under 35 U.S.C. 111(a) on or after November 29, 2000, the specific reference to the prior application must be submitted during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. If the application is a utility or plant application which entered the national stage from an international application filed on or after November 29, 2000, after compliance with 35 U.S.C. 371, the specific reference must be submitted during the pendency of the application and within the later of four months from the date on which the national stage commenced under 35 U.S.C. 371(b) or (f) or sixteen months from the filing date of the prior application. See 37 CFR 1.78(a)(2)(ii) and (a)(5)(ii). This time period is not extendable and a failure to submit the reference required by 35 U.S.C. 119(e) and/or 120, where applicable, within this time period is considered a waiver of any benefit of such prior application(s) under 35 U.S.C. 119(e), 120, 121 and 365(c). A benefit claim filed after the required time period may be

Art Unit: 1711

accepted if it is accompanied by a grantable petition to accept an unintentionally delayed benefit claim under 35 U.S.C. 119(e), 120, 121 and 365(c). The petition must be accompanied by (1) the reference required by 35 U.S.C. 120 or 119(e) and 37 CFR 1.78(a)(2) or (a)(5) to the prior application (unless previously submitted), (2) a surcharge under 37 CFR 1.17(t), and (3) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional. The petition should be addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

4. If the reference to the prior application was previously submitted within the time period set forth in 37 CFR 1.78(a), but not in the first sentence(s) of the specification or an application data sheet (ADS) as required by 37 CFR 1.78(a) (e.g., if the reference was submitted in an oath or declaration or the application transmittal letter), and the information concerning the benefit claim was recognized by the Office as shown by its inclusion on the first filing receipt, the petition under 37 CFR 1.78(a) and the surcharge under 37 CFR 1.17(t) are not required. Applicant is still required to submit the reference in compliance with 37 CFR 1.78(a) by filing an amendment to the first sentence(s) of the specification or an ADS. See MPEP § 201.11.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 24-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Speer et al. (US 5529833) in view of Christiani et al. (US 6,747,560).

Art Unit: 1711

7. Speer discloses multilayer structures using oxygen scavengers. Specifically, an oxygen scavenging composition comprising: (a) an ethylenically unsaturated hydrocarbon and (b) a transition metal catalyst. Wherein the composition is incorporated into a layer such as a film layer, and novel articles for packaging oxygen sensitive products can be prepared therefrom (col. 3, lines 20-44). Speer discloses that suitable multi-layered articles include, but are not limited to, rigid containers, flexible bags, or combinations of both, wherein Speer discloses a multi-layer film comprised of five layers (col. 3, lines 66-67; col. 10, lines 59 to col. 12, line 65). Speer discloses an oxygen barrier layer comprised of PET, wherein the oxygen scavenging layer is placed between two oxygen barrier layers (col. 7, lines 12-20; col. 8, lines 13-16).

8. However, Speer fails to disclose that the oxygen barrier layer comprises platelet particles derived from at least one layered silicate material. Hence attention is directed towards the Christiani reference. Christiani discloses a polymeric nanocomposite comprising a polymeric phase have dispersed therein platelet particles derived from swellable intercalated layered materials (col. 1, lines 13-17). Suitable silicate layered materials include montmorillonite (col. 6, lines 65-41), and suitable swelling/compatibilizing agents include alkoxy based ammonium cations (col. 8, line 31+). Christiani discloses that preferred thermoplastic polymers for the polymeric phase include polyamides (col. 18, lines 22+).

9. Christiani discloses that the swellable layered materials are derivatized with a swelling/compatibilizing agent in order to increase the compatibility and bonding of the layers with the polymer melt (col. 6, lines 36-46).

10. Christiani discloses that the above discusses platelet particles of high strength and modulus dispersed at the nanoscale impart greater mechanical reinforcement to the polymer matrix than do comparable loading of conventional reinforcing fillers of micron size. Additionally, the nanoscale

Art Unit: 1711

barrier layers of the platelet particles impart lower permeability to polymers than do comparable loadings of conventional barrier fillers (col. 3, lines 43-54). Christiani discloses that the nanocomposite composition is especially useful for fabrication of films for use in food packaging (col. 24, lines 9-53). Additionally, Christiani recognizes formation of molded articles and film structures utilizing the inventive platelet composition. Christiani discloses that the molded articles prepared from the inventive platelet composition derive various advantages over products without the platelet particles, advantages include increased modulus, stiffness, wet strength, dimensional stability, heat deflection temperature, and decreased moisture absorption, flammability, permeability, and molding cycle time (col. 24, lines 26-32).

11. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to include in the oxygen scavenging layer of Speer the polyamide platelet particles of Christiani in order to improve the modulus, stiffness, wet strength, dimensional stability, and heat deflection temperature of resulting articles.

Double Patenting

12. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

13. A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with

Art Unit: 1711

this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

14. Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

15. Claims 24-28 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-17 of U.S. Patent No. 6,777,479. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patent claims the polymer-platelet composition, as claimed herein; however, fails to claim multiple layers. Nevertheless, the enabling disclosure makes known this limitation. Therefore the invention defined in the herein claims would have been an obvious variation of the invention of the patent.

16. Claims 24-28 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-22 of U.S. Patent No. 6,610,772. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patent claims a composition comprising platelet particles and an oxygen scavenging system dispersed in a polyamide polymer, as claimed herein. However, the '772 patent fails to claim that the composition is present in a multi-layered article. Nevertheless, the enabling disclosure makes known this limitation. Therefore the invention defined in the herein claims would have been an obvious variation of the invention of the patent. Additionally, the '772 patent claims a multilayered article comprising a layer of platelet particles and an oxygen scavenging system. However, the patent fails to claim the inclusion of polyamide in the layer; nevertheless the enabling disclosure makes know this limitation.

Art Unit: 1711

17. Claims 24-28 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-47 of U.S. Patent No. 6,455,620. Although the conflicting claims are not identical, they are not patentably distinct from each other.

18. Patent claims 1-30, and 44-47 are drawn to a composition comprising a polyamide and oxygen scavenging system. The claims fail to recite the inclusion of platelet particles, as claimed herein. Thus attention is directed towards the Christiani reference, which applies as above. It would have been obvious to one of ordinary skill in the art at the time of the invention to include the layered silicated platelet particles of Christiani in the invention of the '620 patent in order to improve the modulus, stiffness, wet strength, dimensional stability, and heat deflection temperature of resulting articles. Therefore the invention defined in the herein claims would have been an obvious variation of the invention of the patent.

19. Patent claims 32-43 are drawn to multilayered article comprising a layer of platelet particles and an oxygen scavenging system dispersed in a polyamide polymer. However, the patent fails to claim layered silicated platelet particles inclusion of polyamide in the layer. Thus attention is directed towards the Christiani reference, which applies as above. It would have been obvious to one of ordinary skill in the art at the time of the invention to include the layered silicated platelet particles of Christiani in the invention of the '620 patent in order to improve the modulus, stiffness, wet strength, dimensional stability, and heat deflection temperature of resulting articles. Therefore the invention defined in the herein claims would have been an obvious variation of the invention of the patent.

Response to Arguments

20. Applicants' arguments filed have been fully considered but they are not persuasive.

Art Unit: 1711

21. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, as discussed above, the Christiani reference discloses various advantages of the polyamide platelet particles, and thus provides both a teaching and motivation to utilize the polyamide platelet particles in the oxygen scavenging layer of Speer. Thus the rejections are rendered valid.

22. Applicants have argued the three nonstatutory obviousness-type double patenting (ODP) rejections; in support of their argument applicants have stated that the herein application is a divisional of application no. 09/630,517 (now US 6,777,479). However, as discussed above, applicants have failed to properly claim benefit of application no. 09/630,517 under 35 U.S.C. 121. Attention is directed to MPEP § 201.06 and 201.11. Upon perfection of the priority claim the ODP rejection based on US 6,777,479 will be withdrawn.

23. In reference to the ODP rejections based on US 6,610,772 and US 6,455,620, the above ODP rejections address the concerns raised by applicants.

Conclusion

24. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the

Art Unit: 1711

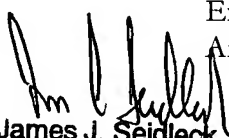
mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saira Haider whose telephone number is (571) 272-3553. The examiner can normally be reached on Monday-Friday from 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Saira Haider
Examiner
Art Unit 1711



James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700